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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,631	12/29/1999	BALWINDER S. SAMRA	17207-00006	2501
7590	04/26/2005		EXAMINER	
JOHN S BEULICK ARMSTRONG TEASDALE LLP ONE METROPOLITAN SQUARE SUITE 2600 ST LOUIS, MO 631022740				VAN DOREN, BETH
		ART UNIT		PAPER NUMBER
		3623		
DATE MAILED: 04/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/474,631	SAMRA ET AL.
	Examiner Beth Van Doren	Art Unit 3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 07 January 2005.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

1. The following is a Final Office action in response to communications received 01/07/2005. Claims 1, 9, and 20 have been amended. Claims 1-22 are pending in this application.

### ***Response to Amendments***

2. Applicant's arguments with respect to the 35 USC § 112, first paragraph, rejections are persuasive and therefore these rejections have been withdrawn. However, Examiner is interpreting the language "using the targeting engine to determine a sequential order for combining the models to define the target group" and "determine a sequential order for combining said models to define the target group" to mean that the targeting engine is using a predetermined sequential order to combine the models, as stated in the Applicant's arguments.

### ***Response to Arguments***

3. Applicant's arguments with respect to the 35 USC § 103 claim rejections have been considered but are moot in view of the new grounds of rejection, as necessitated by amendment.

4. Applicant's arguments with respect to the 35 USC § 101 rejections have been considered and are not persuasive with regards to claims 9-19 and 22, but are found persuasive with regards to claims 1-8 and 20-21. Examiner reminds applicant that a system claim must be made up of hardware elements in order to be statutory. As currently written, the system of claim 9 is composed of files and modules (modules considered software per se), and therefore the system claims are not considered statutory as recited.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 9-19 and 22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

System claims must be made up of hardware elements in order to be statutory. In the present case, claim 9 recites a system comprising a customer database, a graphical user interface, and a targeting engine. Examiner points out that a database is a file per se, and graphical user interfaces and engines are modules or software per se. Therefore, the system of claim 9 is a collection of software and files and, therefore, the system does not expressly contain any hardware elements. Claims 10-19 and 22 depend from claim 9. Therefore, claims 9-19 and 22 are considered directed towards non-statutory subject matter.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

**8. Claims 1-22 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention.**

The assignee's website, [www.ge.com/capital/globalfinance](http://www.ge.com/capital/globalfinance), dated 06/06/1997 discloses that the assignee was providing credit and insurance services to retailers and consumers around the world. See reference A, page 3, section 1. Page 5 outlines the services offered, including marketing support. The system identifies and targets customer groups using technology-based systems that produce proprietary, segmented databases. Marketing experts then work with the retailer customers to evaluate the segments and develop promotions aimed at customer groups identified with high sales potential. The evaluation of the segments define profitable segments and cross sale opportunities as well as helping to develop marketing programs tied to lifecycles by analyzing customer demographics, purchase, promotion, and payment behavior. The effectiveness is tracked. Page 6 discusses the concepts of customer focus and looking at a customer's situation from every angle by looking at the total picture of the customer. Reference B discusses the use of Oracle applications with the systems of GE Capital.

An issue of public use or on sale activity has been raised in this application. In order for the examiner to properly consider patentability of the claimed invention under 35 U.S.C. 102(b), additional information regarding this issue is required as follows: Any further documentation provided to the customers of GE Capital concerning the marketing and other services provided as

well as any documentation concerning the technology-based systems used to produce the segmented databases of GE Capital.

Applicant is reminded that failure to fully reply to this requirement for information will result in a holding of abandonment.

**9. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Honarvar (U.S. 6,321,206).**

10. As per claim 1, Honarvar teaches a method of evaluating marketing campaign data, the data being in the form of database scores, stored procedures, and On Line Analytical Processing (OLAP) multidimensional structures (figure 16, column 15, lines 60-column 16, line 35), said method comprising:

providing a plurality of analytic models including risk models, attrition models, and profitability models, each model is a statistical analysis for predicting a behavior of a prospective customer, wherein a risk model predicts a likelihood of whether the prospective customer will at least one of pay on time, be delinquent with a payment, and declare bankruptcy, an attrition model predicts a likelihood of whether the prospective customer will remain a customer or become a customer of a competitor, a profitability model predicts a net present value of the prospective customer (See column 6, lines 25-30, which discusses target systems. See column 1, lines 48-67, column 2, lines 15-35 and 50-67, column 3, lines 10-35, column 4, lines 20-40, column 8, lines 1-20 and 60-column 9, line 15, wherein a plurality of models (functions/mechanisms) are provided and can be applied independently to the data, these models including attrition, risk, and profitability (likelihood of an accepted offer));

embedding the models within a targeting engine and determining a sequential order for combining the models using the targeting engine, the model combination includes a risk model, an attrition model, and a profitability model (See column 2, lines 1-35 and 50-67, column 3, lines 10-35, column 4, lines 20-40, column 8, lines 1-20, column 9, lines 1-15 and 62-67, wherein models are combined in a sequential order (function set) to define the group);

combining the models in the determined sequential order using the targeting engine to generate marketing campaign data including a target group by defining an initial customer group, the initial customer group includes a list of customers satisfying each of the combined models and rank ordered by projected profitability wherein projected profitability is based on at least one of a probable response by a customer to the marketing campaign, attrition of the customer, and risk associated with the customer, the list includes a high profit end, a moderate profit section, and a low profit end, the high profit end including customers having a highest projected profitability, the low profit end including customers having a lowest projected profitability, the moderate profit section including a profitability baseline, wherein the determined sequential order provides a greater number of customers included between the high profit end and the profitability baseline than any other sequential order of combining the models, the target group includes the customers included between the high profit end of the list and the profitability baseline (See figure 4A, 5, and 9-10, column 4, lines 20-40, column 8, lines 1-20, column 9, lines 1-15, column 10, lines 1-10 and 30-40, column 12, lines 40-60, column 14, lines 10-50, column 15, lines 1-30, wherein the models are combined and the customers are separated into groups based on projected profitability based on at least risk. The ordering of customers includes

a high, middle, and low end, and wherein the system tries to maximize the persons with the most likelihood of a profitable return);

evaluating the model combination using structures that segment gains charts to discover where the model combination is under performing (See figures 9 and 12, column 9, lines 38-61, column 10, lines 20-40, column 11, lines 5-16 and 35-65, column 12, lines 35-50, wherein the model is evaluated for performance per segment and category);

evaluating a performance of the model combination over time (See figures 9 and 12, column 9, lines 38-61, column 10, lines 20-40, column 11, lines 5-16 and 35-65, column 12, lines 35-50, wherein the performance is evaluated over time); and

defining user trends (See column 12, lines 35-57, which discusses trend analysis).

11. As per claim 2, Honarvar wherein said step of defining user trends further comprises the step of determining where profitability has been changing over time (See figures 9 and 12, column 9, lines 38-61, column 10, lines 20-40, column 11, lines 5-16 and 35-65, column 12, lines 35-57, wherein profitability is determined over time).

13. As per claim 3, Honarvar discloses wherein said step of defining user trends further comprises the step of determining where a response rate is changing over time (See column 10, lines 40-50, column 11, lines 35-65, column 12, lines 35-57, wherein response rate is tracked).

14. As per claim 4, Honarvar teaches wherein said step of defining user trends further comprises the step of determining where a number of accounts are being closed (See column 2, lines 10-27, which discusses probability of attrition).

15. As per claim 5, Honarvar discloses wherein said step of evaluating the model combination is accomplished by creating history structures based on user defined attributes (See

column 10, lines 40-50, column 11, lines 35-65, column 12, lines 35-57, wherein specific variables are tracked).

16. As per claim 6, Honarvar discloses wherein said step of defining user trends further comprises the step of analyzing a particular population segment (See figure 12, column 9, lines 38-61, column 10, lines 20-40, column 11, lines 5-16 and 35-65, column 12, lines 35-57, wherein the performance and trends are analyzed of a specific segment).

17. As per claim 7, Honarvar discloses wherein said step of evaluating a performance of the model combination over time further comprises the step of maintaining feedback into a targeting engine to improve subsequent modeling cycles (See column 9, lines 58-62, column 10, lines 50-57, column 11, lines 35-67, column 12, lines 35-57, wherein the strategy is adjusted in subsequent models based on feedback from performance analysis).

18. As per claim 8, Honarvar discloses wherein said step of defining user trends further comprises the step of using gains charts to illustrate model performance in segments (See figure 12, column 11, lines 35-65 and column 12, lines 35-57, which outlines a gains chart representing profit and performance).

19. Honarvar discloses elements of claim 9, as set forth above in the rejection of claim 1.

Honarvar further discloses a system comprising:

    a customer database further comprising historical campaign results (See figures 15-16, column 9, lines 1-15 and 35-60, column 10, lines 30-40, column 11, lines 5-15 and 35-65);

    a graphical user interface for presentation of trend analysis data (See figure 12, column 11, lines 5-16 and 35-64, column 12, lines 35-57, column 13, lines 30-40 and 55-65, and column

14, lines 40-60, which discuss trend analysis and reporting. See column 15, line 55-column 16, line 5 and 20-35, which discuss GUI); and

a targeting engine coupled to the database and the graphical user interface (See figures 15-16, which discloses the system architecture).

20. As per claim 10, Honarvar teaches wherein said targeting engine is further configured to evaluate a combination of models, wherein the combined models include time based multidimensional On Line Analytical Processing (OLAP) history structures (See figure 16, column 13, lines 5-22, column 15, line 60-column 16, lines 35, which discuss OLAP techniques and technology).

21. As per claim 11, Honarvar discloses wherein said targeting engine is further configured to discover user defined trends (See column 9, lines 38-61, column 11, lines 5-16 and 35-65, column 12, lines 35-57).

22. Claims 12-14 recite equivalent limitations to claims 2-4, respectively, and are therefore rejected using the same art and rationale set forth above.

23. As per claim 15, Honarvar discloses wherein said targeting engine is further configured to determine propensity of a customer to avail themselves to other products over time (See column 2, lines 10-27, which discusses probability of attrition).

24. Claims 16-19 recite equivalent limitations to claims 5-8, respectively, and are therefore rejected using the same art and rationale set forth above.

25. Honarvar discloses elements of claim 20, as set forth above in the rejection of claim 1. Honarvar further discloses a method comprising:

storing in a database historical data for a plurality of potential customers including for each potential customer at least one of an age, a gender, a marital status, an income, a transaction history, and a transaction measure (See at least figures 12 and 15, column 2, lines 30-67, column 9, lines 1-15, column 10, lines 1-10 and 30-40, column 11, lines 5-15, wherein at least a transaction history and/or measure is stored);

generating gains charts by comparing customers included in the target group to corresponding marketing campaign results (See figure 12, column 11, lines 35-65 and column 12, lines 35-57, which outlines a gains chart representing profit and performance);

identifying user defined trends including identifying trends within segments by analyzing structures of a plurality of marketing campaigns in chronological order (See figure 12, column 9, lines 38-61, column 10, lines 20-40, column 11, lines 5-16 and 35-65, column 12, lines 35-57, wherein the performance and trends are analyzed of a specific segment in time order).

26. As per claim 21, wherein said step of combining the models in the determined sequential order further comprises the step of:

storing in a database historical data for a plurality of potential customers including for each potential customer at least one of an age, a gender, a marital status, an income, a transaction history, and a transaction measure (See at least figures 12 and 15, column 2, lines 30-67, column 9, lines 1-15, column 10, lines 1-10 and 30-40, column 11, lines 5-15, wherein at least a transaction history and/or measure is stored);

determining a sequential order for combining the models by applying each model to be combined to each of the plurality of potential customers included in the database (See column 2, lines 1-35 and 50-67, column 3, lines 10-35, column 4, lines 20-40, column 8, lines 1-20, column

9, lines 1-15 and 62-67, wherein models are combined in a sequential order (function set) to define the group); and

combining the models in the determined sequential order to define the initial customer group by applying a first model included in the determined sequential order to each of the plurality of potential customers included in the database to generate a first segment of only those potential customers satisfying the first model, applying a second model included in the determined sequential order to the first segment to generate a second segment of only those potential customers satisfying the combination of the first and second models, and then applying each subsequent model included in the determined sequential order to a segment generated by the combination of each prior model (See figures 5 and 10, column 4, lines 20-40, column 8, lines 1-20, column 9, lines 1-15, column 10, lines 1-10 and 30-40, column 15, lines 1-30, column 17, lines 40-60, wherein the models are combined in a sequential order, with a first segment model applied then a category model, etc.).

27. Claim 22 recites equivalent limitations to claim 21 and is therefore rejected using the same art and rationale as set forth above.

### *Conclusion*

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen et al. (U.S. 2003/0097292) teaches a system for analysis of profitability using risk and stability models.

Bibelnieks et al. (U.S. 6,567,786) discloses compiling customer data such as behavioral data, demographic data, etc. and segmenting the customers into asset classes.

Blume et al. (U.S. 6,839,682) teaches using financial behavior stored about consumers to segment the consumers.

Phillips et al. (U.S. 6,792,399) discloses a database of prediction data used for clustering and forecasting.

Rothman et al. (U.S. 6,505,168) teaches storing and manipulating customer purchasing information to create a hierarchical organizational structure, thereby allowing targeted offers to be made to customers.

Skelly ("GE Capital's Global Play") teaches the global marketing and hold of GE Capital.

"GE's Recipe for Global Growth" (Retail Banker International) teaches the financial services offered by GE, including Global Consumer Finance, around the world.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Van Doren whose telephone number is (571) 272-6737. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*lw*  
bvd

April 20, 2005



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